# Chapter 1
# Introduction

## 1-1. Purpose

*a*. This Engineer Manual (EM) provides U.S. Army Corps of Engineers (USACE) and other personnel with procedural guidance to develop Conceptual Site Models (CSMs) at sites potentially containing ordnance and explosives (OE) or hazardous, toxic, and radioactive waste (HTRW), or both. The CSM is an integral part of the Technical Project Planning (TPP) process. The target audience is the Project Delivery Team (hereinafter referred to as the team).

*b.* A primary objective of this guide is to bring synergy to the OE and environmental projects at a site. There are numerous closing and formerly used military sites in this country that have both OE and HTRW issues. These issues have typically been addressed as separate program categories within USACE, with one focusing exclusively on OE and another on HTRW. A common goal for each program category, however, is to achieve site closeout in a safe, environmentally responsible, and cost-effective manner. It is critical to coordinate efforts to obtain this goal of site closeout. The USACE District Project Manager (PM) must ensure that site data collection supports both program categories and is utilized efficiently. Sites are commonly addressed sequentially, beginning with OE before focusing on HTRW. Rarely are both implemented at the same time, often as a result of differing safety priorities or budgets. However, knowing the distribution of OE at a site and any recorded observations of spills, stains, or buried waste can be a critical first layer of data to build a CSM for an HTRW project. Development of an OE CSM should assist the team in designing the environmental data collection and response actions, resulting in more efficient use of resources and faster closeout at sites. Additional benefits include better understanding and appreciation of the coordinated process required by regulatory personnel and other stakeholders.

> Pursuant to the Corps' Project Management Business Process, the District Project Manager is the leader of the project delivery team (PDT) who must seamlessly integrate USACE efforts to deliver the best possible solution for the customer. The OE and HTRW team members must coordinate with each other to ensure that data collection is complementary and meets project objectives.

*c*. This guidance should be used together with other USACE guidance for project execution. Development of a CSM is an integral component of planning and data collection activities described in the USACE TPP Process (EM 200-1-2). The TPP process provides a framework for identifying project objectives to achieve site closeout, determining data needs to meet those objectives, evaluating the options for data collection, and finalizing the data collection program for optimum results. It also fulfills the requirements of the systematic planning process endorsed by the U.S. Environmental Protection Agency (USEPA). The TPP process allows for development of Data Quality Objectives (DQOs) through a step-wise series of problem identification, analysis, and response. It encourages the team to determine data gaps, to ensure data collected are ap-

propriate for the project objectives, and to consider the end use of data before they are collected. This process results in more efficient and cost-effective investigation, cleanup, and monitoring.

*d*. This manual is also consistent with USACE Engineer Regulation (ER) 5-1-11, U.S. Army Corps of Engineers Business Process; ER 1110-1-263, Chemical Data Quality Management for Hazardous Waste Remedial Activities; and EP 1110-1-18, Ordnance and Explosives Response. Users are required to review these other guidance documents to determine the applicable integration of CSM guidance.

## 1-2. Scope

The CSM development process in this manual is applicable to any phase of an OE or HTRW project. These include investigation, design, response phases, and during operation/maintenance of remedial systems with recurring review. The CSM is not a separate deliverable, but a component of existing documents such as work plans, sampling and analysis plans, site characterization reports, final removal reports, or similar documents as determined by the team. This process may be applied under any regulatory framework.